

What is Claimed is:

1. A liquid spray gun comprising  
a body assembly including a nozzle portion with an outlet end, said nozzle  
5 portion having a liquid passageway extending from an inlet end to an outlet end  
opening through the outlet end of the nozzle portion,  
said body assembly having a first air passageway extending from an inlet  
end to an outlet end at the outlet end of said nozzle portion, said outlet end of said  
first air passageway extending around said outlet end of said liquid outlet  
10 passageway and being shaped to direct air under greater than atmospheric pressure  
against liquid flowing out of the outlet end of the liquid outlet passageway to  
propel the liquid away from the outlet end of the nozzle portion while shaping the  
liquid into a generally conical stream about an axis,  
said body assembly including horns projecting past the outlet end of the  
15 nozzle on opposite sides of said axis,  
said body assembly having a second air passageway extending from an inlet  
end to outlet passageways and apertures spaced along said horns from the outlet  
end of the nozzle and facing opposite sides of said axis, said outlet passageways  
and apertures being shaped to direct air under greater than atmospheric pressure  
20 flowing through said second air passageway against opposite sides of a stream of  
liquid formed by air flowing through the first air passageway to reshape that stream  
of liquid into a wide elongate stream,  
said liquid spray gun further including a platform portion having through  
air distribution passageways including an inlet opening adapted to be connected to  
25 a supply of air under greater than atmospheric pressure, first and second air outlet  
openings, means for separately regulating the flow of air through said first and  
second air outlet openings of said air distribution passageways, and manually  
operated means for stopping or allowing flow of air through said outlet openings of  
said air distribution passageways, and  
30 said platform portion and said nozzle portion having manually operable  
means for releasably mounting said nozzle portion on said platform portion with

said first and second air outlet openings of said air distribution passageways communicating with the inlet ends of said first and second passageways.

2. A liquid spray gun according to claim 1 wherein said manually operable means for releasably mounting said nozzle portion on said platform portion comprises said platform portion including a support wall having opposite inner and outer surfaces, an opening through said support wall between said inner and outer surfaces, and said nozzle portion including a projection from a contact surface on the side of said nozzle portion opposite said outlet end, said projection being received in said opening through said support wall with said contact surface against said outer surface and a distal part of said projection projecting past the outer surface of said support wall, said distal part of said projection having a transverse groove, and said manually operable means further including a latching member releasably engaged in said transverse groove adapted for manual removal from said distal part.

3. A liquid spray gun according to claim 2 wherein said latching member is mounted on a frame of the platform member for sliding movement transverse of said opening between (1) an engaged position at which a portion of the latching member will be positioned in part of the transverse groove if the projection is fully in said opening to retain the projection and thereby the nozzle portion in engagement with the platform portion, and (2) a release position to which the latching member can be manually slid against the bias of a spring between the latching member and the frame that biases the latching member to its engaged position, at which release position an opening through the latching member larger than the projection is aligned with the projection to allow the nozzle portion to be mounted on or removed from the platform portion.

4. A liquid spray gun according to claim 1 wherein said (cam)

5. A liquid spray gun according to claim 1 wherein said nozzle portion is molded of polymeric material, and said body assembly includes an air cap portion

molded of polymeric material having said horns, and means mounting said air cap portion on said nozzle portion, said molded air cap and nozzle portions having surfaces forming said first and second air passageways,

5           6. A spray gun according to claim 1 wherein said outlet passageways and apertures in said horns are non-circular.

7. A spray gun according to claim 1 wherein said outlet passageways and apertures in said horns have a greater width in a direction at a right angle to said  
10   axis than depth in a direction parallel to said axis.

8. A spray gun according to claim 7 wherein said outlet passageways and apertures in said horns are generally rectangular.

15           9. A spray gun according to claim 1 wherein said outlet passageways and apertures comprise first and second pairs of opposed outlet passageways and apertures in said horns, said first pair of outlet passageways and apertures each having a width in a direction at a right angle to said axis of about 0.154 inch or 0.39 cm, a depth in a direction parallel to said axis of about 0.35 inch or 0.89 cm,  
20   and being spaced about 0.25 inch or 0.64 cm from the outlet end of the nozzle portion, and said second pair of outlet passageways and apertures each having a width in a direction at a right angle to said axis of about 0.165 inch or 0.42 cm, a depth in a direction parallel to said axis of about 0.05 inch or 0.13 cm, and being spaced about 0.35 inch or 0.89 cm from the outlet end of the nozzle portion.

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10. A liquid spray gun according to claim 1 wherein said body assembly includes an air cap portion having said horns, and means mounting said air cap portion on said nozzle portion, said molded air cap and nozzle portions having surfaces forming said first and second air passageways, said means mounting said  
30   air cap portion on said nozzle portion allows rotation of said air cap portion about said axis relative to said nozzle portion, said air cap and nozzle portions include stops limiting relative rotation of said air cap and nozzle portions to rotation

through a predetermined angle between first and second relative positions, and said means mounting said air cap portion on said nozzle portion includes surfaces in frictional engagement to restrict relative rotation of said air cap and nozzle portions until a predetermined torque is applied between said air cap and nozzle portions.

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11. A liquid spray gun according to claim 10 wherein said predetermined angle is about 90 degrees.

10 12. A spray gun according to claim 1 wherein said outlet end of said first air passageway is shaped to direct a peripheral portion of air exiting said first air passageway in a converging conical pattern against liquid exiting the outlet end of said liquid passageway.